

Before the
FEDERAL Communications Commission
Washington, D.C. 20554

In the Matter of:

Amendment of Section 73.21 and 73.37,
of the Commission's Rules to Provide for Facilities
Changes by Stations Operating in the Expanded
AM Band (1605-1705 kHz)

MB Docket No. PRM04MB
RM- _____

TO: Audio Division

SUPPLEMENT TO PETITION FOR RULEMAKING

InterMart Broadcasting of Georgia, Inc., Rama Communications, and Multicultural Radio Broadcasting, Inc. (collectively, the "Expanded Band Petitioners" or the "Petitioners"), by their attorneys, respectfully supplement their Petition for Rulemaking, originally filed in this proceeding, under date of October 22, 2004, as follows:

1. Under date of October 22, 2004, Petitioners filed a Petition for Rulemaking, asking that the Rules be amended to allow substantial improvements in the facilities of AM Broadcast Stations operating in the Expanded Band (1610-1700 kHz). A question has arisen as to why Petitioners need the relief requested in the Petition.

2. Briefly, ground wave propagation in the frequencies allotted to the Expanded Band is perfectly awful. As shown by the attached engineering statement, prepared by William G. Brown, there is an enormous discrepancy between ground wave propagation on 540 kHz at the bottom of the regular AM Band, and 1700 kHz, at the top of the Expanded Band. The disparity is a function of ground conductivity. At a ground conductivity of 0.5 mS/m, it takes as little as 2.4 kW on 540 kHz to generate a signal

equivalent to a 50 kW signal on 1700 kHz. As ground conductivity increases, the disparity becomes even greater, so that with a ground conductivity of 8 mS/m, it requires only 180 W to generate a signal on 540 kHz, which is equivalent to a 50,000 W signal on 1700 kHz.

3. With conductivities above 8 mS/m, the trend reverses so that, at a conductivity of 30 mS/m, a signal of 850 W on 540 kHz is required, to generate the equivalent of a 50,000 W signal on 1700 kHz. However, as Mr. Brown points out, there are very few areas in the United States where the ground conductivity is as high as 30 mS/m. In most places, a few hundred watts on 540 kHz is as good as 50,000 W on 1700 kHz.

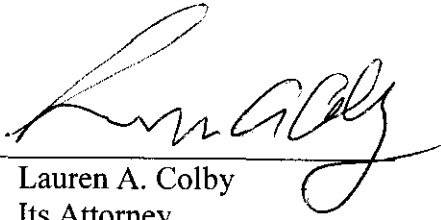
4. In short, there is a tremendous disparity in coverage between stations in the lower part of the regular AM Band, and stations operating in the Expanded Band. Granting the relief requested in the Petition for Rulemaking will simply enable Expanded Band stations to generate signals which are equivalent to the signals enjoyed by existing stations in the regular AM Band. Thus, a grant of the requested relief will level the playing field. Licensees of Expanded Band stations, who are presently second class citizens, will simply be afforded the same rights and privileges which are currently available to similarly classed stations (Class B stations) in the regular AM Band.

December 15, 2004

Law Office of
LAUREN A. COLBY
10 E. Fourth Street
P.O. Box 113
Frederick, MD 21705-0113


Respectfully submitted,

INTERMART BROADCASTING OF
GEORGIA, INC.

By: 
Lauren A. Colby
Its Attorney

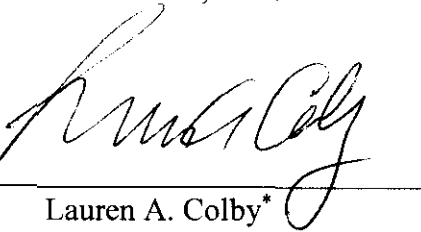
RAMA COMMUNICATIONS, INC.

PUTBRESE HUNSAKER
& TRENT, PC
200 South Church Street
Woodstock, VA 22664

By: 
John C. Trent
Its Attorney

MULTICULTURAL RADIO
BROADCASTING, INC.

Law Office of
LAUREN A. COLBY
10 E. Fourth Street
PO Box 113
Frederick, Maryland 21705-0113

By: 
Lauren A. Colby*
Its Attorney

* Lauren A. Colby is acting as special counsel for Multicultural Radio Broadcasting, Inc. in this proceeding only.

TECHNICAL STATEMENT
Comparison of AM Broadcast Contours

December 2004

It is well known that ground wave propagation in the AM Broadcast Band is better at the lower frequencies than at the higher frequencies. This office has been engaged to quantify the difference. To that end, we calculated the amount of power which would be needed at 540 kHz to generate a signal which produced the same distance to the 0.5 mV/m contour as would be produced by a station on 1700 kHz, operating with 50 KW of power. We found that the difference or disparity was a function of ground conductivity.

All of our calculations were made in the manner prescribed in the FCC's Rules. In each case, we assumed that both stations (the one on 540 kHz and the one on 1700 kHz) were operating with a $\frac{1}{4}$ wave length, 90 electrical degree vertical antenna. In each case, we assumed a uniform ground conductivity.

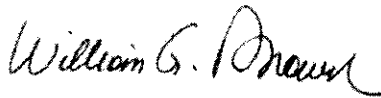
The results of our calculations are as follows:

<u>mS/m</u>	<u>Power of 540 station</u>
0.5	2.4 kW
1.0	1.0 kW
2.0	0.4 kW
4.0	0.24 kW
8.0	0.18 kW
10	0.2 kW
15	0.4 kW
30	0.85 kW

As can be seen, a station operating on 540 kHz with a ground conductivity of 1 mS/m needs only 1.0 KW to generate a signal equivalent to 50,000 watts on 1700 kHz. As the conductivity increases, the difference increases until, at a conductivity of 8 mS/m, it takes a mere 180 watts to generate a signal on 540 kHz, equivalent to 50,000 watts on 1700 kHz. With conductivities above 10 mS/m, the trend reverses, so that with a conductivity of 30 mS/m, 850 watts is required to generate the equivalent signal.

Conductivities as high as 30 are, of course, rare, and largely confined to the Midwest. Conductivities below 1 are also rare. We believe, therefore, our calculations for conductivities between 1 and 10 are typical of the differences that will generally be encountered.

Bromo Communications, Inc.

A handwritten signature in cursive script, reading "William G. Brown".

Technical Consultant